

Bullying and Performance Anxiety  
in Classically Trained Singers

by

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## ABSTRACT

A strong correlation exists between the effects of bullying on a singer and his or her performance anxiety. An exhaustive literature review and a survey of classical singers were used to assess this hypothesis. The survey was compiled using standard psychological and current performance anxiety questionnaires with additional questions created by the author. The data were analyzed using a Pearson Product-Moment Correlation, a regression analysis, and an Analysis of Variance.

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## **Introduction**

Bullying has always been an issue in school settings, but has recently escalated to new heights. In 2013 alone, several cases of “bullycide” have made national news.

Bullycide is a new term used to explain why someone commits suicide as a result of being bullied.<sup>1</sup> Those who do not commit suicide may go on to suffer long-term psychological issues and performance anxiety. I do not intend to prove that every person who has been bullied has performance anxiety or that every person who suffers from performance anxiety has been previously bullied; however, it is possible for this connection to exist in performers.

A strong connection may exist between the effects of bullying on a singer and that singer's performance anxiety; the singer may not only show physiological changes that affect the vocal mechanism and body, but also experience restricted emotional expression and communication of text. A victim of bullying is at a high risk of emotional distress and self-doubt. These self-esteem issues, which may include body image issues, often lead to anxiety in professional situations such as performing for an audience. However, some people find benefits from these negative life experiences through various methods and therapies, which include an enhanced work ethic and self-acceptance. In this paper, I will summarize negative and positive repercussions of bullying, argue that these two are connected, and show the ways one may overcome bullying's negative effects.

I hypothesize that a significant correlation exists between the effects on a singer who has been bullied and that singer's performance anxiety. I will test this hypothesis

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<sup>1</sup> “Bullycide,” Bullying Statistics, accessed November 28, 2013, <http://www.bullyingstatistics.org/content/bullycide.html>.

by distributing a survey to singers and by analyzing the data. I will discuss significant findings regarding bullying and performance anxiety in the field. I predict that the more severe the bullying, the greater the performance anxiety. I also predict that the higher the bullying severity, the greater the mental health issues; hence, when performers have higher mental stress, they are more likely to have performance anxiety. This performance anxiety will, in all likelihood, cause said performers to stop pursuing a career in performance. They may have a career related to the field such as teaching or directing, but their desire to perform as their main source of income is lessened.

### **Negative Effects of Bullying**

Reports show approximately fifteen to twenty percent of students experience bullying during grades K-12, making it the most widespread form of school violence.<sup>2</sup> In more recent studies, this number has climbed to ten to thirty percent of children reporting being bullied by their classmates.<sup>3</sup> The most common side effect from bullying is psychological distress, but physical ailments are also a factor. Physical symptoms may include headaches, loss of appetite, stomach pain, sleep problems, and bedwetting.<sup>4</sup> Common psychological issues include anxiety, depression, low self-esteem, and

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<sup>2</sup> Robert A. Geffner, Marti Loring, and Corinna Young, *Bullying Behavior: Current Issues, Research, and Interventions* (New York: Haworth Maltreatment & Trauma Press, 2001), 96.

<sup>3</sup> Monica J. Harris, *Bullying, Rejection and Peer Victimization: A Social Cognitive Neuroscience Perspective* (New York: Springer, 2009), 103.

<sup>4</sup> "Bullying," MedlinePlus, last modified November 13, 2013, <http://www.nlm.nih.gov/medlineplus/bullying.html>.

psychosomatic symptoms.<sup>5</sup> Researchers have discovered a relationship between depression and bullying, and those bullied as children are more likely to suffer from depression as adults.

Cyber bullying is a trend on the rise with the increase use of social media. The US National Institute of Health found that victims of cyber bullying were even more likely to suffer from depression than face-to-face victims. The current theory is that cyber bullying is more relentless, frightening, and discouraging, because the bully often remains anonymous.<sup>6</sup> For many victims, bullying leads to a decreased self-worth, which leads to depression and anxiety. Recent evidence emphasizes the association between bullying and mental health.<sup>7</sup> Not only do victims possess lower self-esteem, but over time, anxiety and depression may lead to physical illness and result in a passive style of coping (i.e., learned helplessness).<sup>8</sup>

In a study of middle school children, Graham and Juvonen discovered that persons who perceived themselves as victims were more likely to suffer from adjustment problems such as loneliness, social anxiety, and low self-worth. Low self-esteem may lead to victimization, which over time may lead to a further decrease in self esteem- perpetuating a vicious cycle. Graham and Juvonen state that “children who view themselves as socially incompetent behave in ways that promote abuse by

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<sup>5</sup> Ibid.

<sup>6</sup> “Bullycide,” Bullying Statistics, accessed November 28, 2013, <http://www.bullyingstatistics.org/content/bullycide.html>.

<sup>7</sup> Geffner, *Bullying Behavior: Current Issues, Research, and Interventions*, 97-100.

<sup>8</sup> Ibid., 100.



others (the antecedent function of low self-worth) and they feel worse about themselves as victimization escalates over the school year.”<sup>9</sup> A differential relationship exists between self-perceived victims and those whom peers identified as victims. Self-perceived victims had higher levels of anxiety than victims identified by peers. Graham and Juvonen found that “middle school students who viewed themselves as victims (whether they were or were not) reported higher scores in social anxiety than students who viewed themselves as non-victims (whether they were or were not).<sup>10</sup>

These health and mental problems can have a long-lasting affect. In adolescence and adulthood, victims experience more severe health problems, depression, and lower self esteem than non-victims.<sup>11</sup> However, according to the previously mentioned studies, it seems possible for a victim to exacerbate or reduce the negative effects based on attitude toward the situation.

### **Negative Effects of Performance Anxiety**

What is performance anxiety? Some researchers categorize it as social anxiety, but I believe Dianna T. Kenney provides the best description. She states:

Music performance anxiety is the experience of marked and persistent anxious apprehension related to musical performance that has arisen through specific anxiety-conditioning experiences. It is manifested through combinations of affective, cognitive, somatic and behavioural symptoms and may occur in a range of performance settings, but is usually more severe in

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<sup>9</sup> Ibid., 98-99.

<sup>10</sup> Ibid., 101-102.

<sup>11</sup> Monica J. Harris, *Bullying, Rejection and Peer Victimization: A Social Cognitive Neuroscience Perspective* (New York: Springer, 2009), 103.

settings involving high ego investment and evaluative threat. It may be focal (i.e. focused only on music performance), or occur comorbidly with other anxiety disorders, in particular social phobia. It affects musicians across the lifespan and is at least partially independent of years of training, practice, and level of musical accomplishment. It may or may not impair the quality of the musical performance.<sup>12</sup>

An estimated two percent of the US population suffers from debilitating performance anxiety, and roughly one-third of this population has another existing disorder such as depression or social anxiety.<sup>13</sup> Based on the finding that performance anxiety and social anxiety *can* exist independently, it is logical to conclude that performance anxiety is *not necessarily* a social anxiety.

A combination of physical, mental, and emotional changes occurs when a performer experiences anxiety. Physical symptoms may include excessive sweating, trembling limbs, increased heart rate, and shallow breathing. But according to Stuart Dunkel, “tension is the is the performer’s greatest obstacle because it stifles the creative impulses and makes it impossible to express what one really feels.”<sup>14</sup>

Because normal levels of self-doubt are intensified after being bullied, the performer becomes inhibited; she will second-guess actions within the performance, a practice which restricts the freedom to be creative on stage. If the singer feels restricted, she is not thinking about the performance; for example, she is focusing on her appearance

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<sup>12</sup> Patrik N. Juslin, and John A. Sloboda, Editors, *Handbook of Music and Emotion: Theory, Research, Applications* (New York: Oxford University Press, 2010), 433.

<sup>13</sup> Ibid., 428.

<sup>14</sup> Peter Sheng-Feng Kuan, “Performance Anxiety and the College Musician: A Survey Study of Situational Triggers, Symptoms, and Ways of Coping” (PhD diss., New York University, 2012), 14.

and mistakes in the music, and is therefore not effectively communicating the text.

Anxiety may play a role in a performer's career. Reports show that at least twenty five percent of college musicians experience anxiety severe enough to impact goals of pursuing a career in performance or related professions.<sup>15</sup> Fifty-nine percent experience less severe forms of performance anxiety that nevertheless impair performance and/or well-being.<sup>16</sup>

As performers grow older and gain more experience, anxiety typically decreases, but traces remain.<sup>17</sup> Beck and Emery explain that the perception of a threat triggers an anxiety response created by: overestimating the probability of a feared event, overestimating the severity of the feared event, underestimating coping resources (what you can do about it), and underestimating rescue factors (what other people can do to help you).<sup>18</sup>

### **Positive Effects of Bullying**

According to Ken Rigby, varying views are held regarding victimization and health. Bullying may have a positive effect on one's mental health. Some may argue that bullying builds character. On the surface this sounds cruel, but to truly

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<sup>15</sup> Ibid., 6.

<sup>16</sup> Juslin, *Handbook of Music and Emotion: Theory, Research, Applications*, 428.

<sup>17</sup> Richard Parncutt and Gary E. McPherson, editors, *The Science & Psychology of Music Performance: Creative Strategies for Teaching and Learning* (New York: Oxford University Press, 2002), 49.

<sup>18</sup> Parncutt, *The Science & Psychology of Music Performance: Creative Strategies for Teaching and Learning*, 49.

understand the positive outcomes of a horrible situation we must fully understand it. Researchers have widely varying opinions as to the appropriate scientific definition of bullying ranging from: something evil or purposeful, attitude rather than action, power imbalance, thinking of hurting someone versus actually hurting them, and “continuous abusive behaviour”.<sup>19</sup> Harris classifies bullying under a larger umbrella term: aggression. He defines aggression as “any behaviour, verbal and nonverbal, that is intended to harm another living being who is motivated to avoid such treatment.”<sup>20</sup> I believe the definition should not be limited to how one is abused (physically or emotionally) or the length of time one is abused (one occurrence or on a daily basis), but should be defined by the victim’s experience. Bullying is more about how the victim feels, not necessarily about the actions of the bully.<sup>21</sup> Although victims of bullying may not be able to control how others treat them, they are able to control their own actions and responses to the situation. Controlling the situation gives the victim the upper hand; therefore, the situation is only what you make of it. If the victim can prevent a negative situation from affecting self-esteem they become more resilient.<sup>22</sup>

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<sup>19</sup> Ken Rigby, *New Perspectives on Bullying* (London: Jessica Kingsley Publishers, 2002), 27-33.

<sup>20</sup> Monica J. Harris, *Bullying, Rejection and Peer Victimization: A Social Cognitive Neuroscience Perspective* (New York: Springer, 2009), 103.

<sup>21</sup> Rigby, *New Perspectives on Bullying*, 27-33.

<sup>22</sup> Rigby, *New Perspectives on Bullying*, 104.

### **Positive Effects of Performance Anxiety**

Some musicians insist that a certain amount of anxiety is necessary for a successful performance, and without it they lose energy and focus.<sup>23</sup> Parncutt describes this ideal balance of anxiety and relaxation as optimal arousal:

A certain degree of arousal actually helps the quality of performance as judged by an audience, and this applies to a level that is experienced by the performer as unpleasant, stressful, and presumed to be detrimental. It is widely accepted that the quality of performance is related to arousal with an inverted-U curve. That is, very low levels of arousal are insufficiently motivating and give rise to lackluster performances, while excessive arousal interferes with performance because concentration is disrupted, memory blocks occur, and there is a loss of steadiness in hands and voice.<sup>24</sup>

Not only does the presence of balanced arousal during a performance strengthen the performance, but also anticipation of a performance may motivate a musician to achieve the highest possible level of competency.

### **Post- Bullying Coping Mechanisms**

Studies suggest a direct relationship between a victim's perception of control over a prior bullying experience and long-term problems they experience due to this bullying. Bullied students who believed they could influence or escape a bully reported fewer long-term effects; therefore, perception of control is key.

Unfortunately, a victim may not have control over how they are treated. It is

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<sup>23</sup> Kuan, "Performance Anxiety and the College Musician: A Survey Study of Situational Triggers, Symptoms, and Ways of Coping", 13.

<sup>24</sup> Parncutt, *The Science & Psychology of Music Performance: Creative Strategies for Teaching and Learning*, 50.

impossible to control the past, but hurting victims can focus on the present and future to find fulfillment and happiness.

Having a strong support system tends to lessen bullying's impact. The presence of positive peers and family members provides messages of self-worth and increases self-esteem. If a victim has high self-esteem little long-term damage from bullying can be done. Therapy can be a tool to help rebuild self-esteem. Therapists provide patients with opportunities to play out social scenarios to improve confidence and lessen anxiety.<sup>25</sup> Another path one may choose is counseling. Specialists use techniques for bullying, which include: transactional analysis (assessing other people's behavior as well as your own), assertiveness techniques to confidently express themselves, and Cognitive Behavioral Therapy (altering thought patterns to impact behavior).<sup>26</sup>

### **Performance Anxiety Therapies**

Types of performance anxiety treatments include beta-blockers, behavioral and cognitive-behavioral therapy, behavioral and cognitive strategies, the Alexander Technique, and hypnotherapy.<sup>27</sup> The beta-blocking drugs propranolol and oxprenolol are shown to increase the quality of performance, but reports show possible side effects including fatigue, depression, nightmares, and delusions. Desensitization

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<sup>25</sup> "The Long Term Effects of Bullying," Mark Dombeck, accessed November 29, 2013, <http://www.aets.org/article204.htm>.

<sup>26</sup> "Bullying," Counselling Directory, accessed November 27, 2013, <http://www.counselling-directory.org.uk/bullying.html>.

<sup>27</sup> Parncutt, *The Science & Psychology of Music Performance: Creative Strategies for Teaching and Learning*, 51.

strategies are proven to be effective, but less effective than other coping strategies. Relaxation training has been proven to be just as effective. In a study on stage fright conducted by Kondas, systematic desensitization did not improve performance, only the level of anxiety. In later studies Spielberger, Anton, and Bedell concluded: “successful reduction of anxiety in evaluative situations is not sufficient to bring about improvement in performance.”<sup>28</sup>

Exercise has been shown to be as effective as relaxation training in reducing anxiety, but strenuous exercise is not always possible before a performance. Nideffer and Hessler developed a treatment program combining relaxation and attentional training. Subjects listened to a tape combining breathing exercises and tips for redirecting focus when imagining negative situations involving failure. These subjects followed this method over a period of two weeks, and were found to have gained control over tension levels, and additional treatment was rarely needed. Hypnosis also combines these relaxation and cognitive/attentional approaches.<sup>29</sup>

Performance anxiety decreases as professional status rises. In a study comparing students to young professional opera singers, Steptoe found no differences in anxiety. This means there may not be a difference between

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<sup>28</sup> Thomas M. Plott, “An Investigation of the Hypnotic Treatment of Music Performance Anxiety,” (PhD diss., University of Tennessee, 1986), 27-33.

<sup>29</sup> Ibid., 31-33.

performing for five years or for ten.<sup>30</sup> In another study performed by Salmon, “insufficient performance experience” does not result in performance anxiety. Data shows that frequency of performance does not reduce anxiety, but rather is decreased over a course of many years. In addition, quality of performance may be more beneficial than greater exposure, because excessive exposure to negative performing scenarios may be detrimental to the psyche of the performer.<sup>31</sup>

In the words of Elbert Hubbard: “If pleasures are greatest in anticipation, just remember that this is true of trouble.”<sup>32</sup> This concept can be applied to many aspects of life. If one anticipates a potentially negative situation, it is likely for that person to worsen the scenario. Beck and Emery define anxiety as an emotional response to fear, which is activated when a person is exposed to a stimulus perceived as threatening.<sup>33</sup> The common thread to bullying and performance anxiety is fear- fear of rejection, fear of embarrassment, and fear of failure.

As I have mentioned earlier, perception is key to alleviating negative affects of bullying. Similarly, perception plays a significant role in managing performance anxiety. Many similarities between bullying and performance anxiety exist and it would be interesting to examine results of interchanging coping mechanisms. Professional musicians believe it is beneficial to have a healthy outlook or “worldview” on life as well

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<sup>30</sup> Joy L. Huston, “Familial Antecedents of Musical Performance Anxiety: A Comparison with Social Anxiety,” (PhD diss., Loyola University Chicago, 2001), 77.

<sup>31</sup> Huston, “Familial Antecedents of Musical Performance Anxiety: A Comparison with Social Anxiety,” 88-89.

<sup>32</sup> Rigby, *New Perspectives on Bullying*, 103.

<sup>33</sup> Mary Elizabeth Taylor, “Meditation as Treatment for Performance Anxiety in Singers,” (PhD diss., University of Alabama, 2001), 15.



as an understanding of one's own strengths and weaknesses.<sup>34</sup> When a performer is comfortable with herself, she has a greater ability to be comfortable on stage.

### **The Survey**

A survey was created to test my hypothesis. The survey was advertised via social media (as this is a primary source of communication and business with those in the field). The subjects of the survey participated voluntarily, there was no monetary compensation, and they remained anonymous. The subjects were over the age of 18 and were either college students pursuing a vocal Performance or Opera degree, or those whom had graduated with a degree in this field.

The survey consists of 50 questions and is separated into seven sections. The first set (questions 1-4) concerns demographics. Set number two (questions 5-15) contains questions regarding current bullying in the field within the past six months. These questions refer to bullying that the singer has experienced from teachers, coaches, conductors, directors, colleagues, supervisors and peers. Set three (questions 16-21) examines bullying during childhood. Set four (questions 22-26) is a Satisfaction With Life Scale. This short scale was developed by psychologist Ed Diener to assess one's overall satisfaction with life.<sup>35</sup>

Set five (questions 27-32) is a series of mental health questions commonly known in the field of psychology as K-6. It was created by R.C. Kessler in 2003 to

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<sup>34</sup> Kuan, "Performance Anxiety and the College Musician: A Survey Study of Situational Triggers, Symptoms, and Ways of Coping", 148-151.

<sup>35</sup> Ed Diener, R.A. Emmons, R.J. Larson, & S. Griffin, "The satisfaction with life scale," *Journal of Personality Assessment* 49 (1985): 71-75.

measure psychological distress and used for screening of depression and/or anxiety disorders.<sup>36</sup> It consists of six questions regarding depressive and anxiety symptoms experienced in the past 30 days. The higher one scores on the test, the more likely that individual is to suffer from a severe mental health disorder.<sup>37</sup>

Set six (questions 33-49) asks about performance anxiety. This is a set of questions from a survey by Margaret S. Osborne and Dianna T. Kenney as published in the book, *The Psychology of Music Performance Anxiety*.<sup>38</sup> I have added the two questions to the end of this set pertaining to classical singers. The final set is a single question (question 50) that asks the participant if bullying has hindered their desire to pursue performing as a career. For a full list of survey questions, please reference item 1 in the Appendix.

## **The Results**

In total, 357 subjects completed the survey that was disbursed and finalized in 2015. The age range of participants was from age 18 to 69, with an average age of 31. Roughly 83% of the participants were women and the majority of the racial and ethnic backgrounds were white and non-Hispanic. Gender differences are not significant as shown by probability values in figure 13 of the Appendix. Essentially, males and females reported the same amount of bullying and performance anxiety in their

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<sup>36</sup> “K10 and K6 Scales,” National Comorbidity Survey, accessed January 18, 2017, [https://www.hcp.med.harvard.edu/ncs/k6\\_scales.php](https://www.hcp.med.harvard.edu/ncs/k6_scales.php).

<sup>37</sup> “Guide to Kessler 6,” MindHealthConnect, accessed January 19, 2017, <http://www.mindhealthconnect.org.au/guide-to-kessler-6>.

<sup>38</sup> Dianna T. Kenny, *The Psychology of Music Performance Anxiety* (New York: Oxford University Press, 2011), 106.

respective survey categories. In the category of recent bullying on a possible point scale from 11-55, the mean was 19.1 points. The mean points for childhood bullying was 14.4 on a scale of 6-30. The satisfaction with life section had a mean of 21.9 on a scale of 5-35. The K6 had a mean of 9.4 on a 6-30 range, and the performance anxiety section had a 46.7 on a scale from 0-102. These means tend to be on the lower end of the spectrum for each category. This information suggests that most of the singers surveyed are happy and well adjusted. 41% of participants said that bullying had hindered their desire to pursue performing as a career.

In the data analysis, the Pearson Product-Moment correlation test was used to calculate how much of a correlation there is between variables. The Pearson correlation test measures the strength of a linear association by graphing two variables on an X-Y axis, and the rate in which they intersect is expressed by  $r$ . The range of  $r$  is from +1 to -1 with higher values indicating a positive association and lower values (any number below 0) indicating a negative association. A value of 0 signifies that there is no correlation. A visual example can be found in figure 1, and a reference to the strength of association in numerical value can be found in figure 2.<sup>39</sup>

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<sup>39</sup> “Pearson Product-Moment Correlation,” Laerd Statistics, accessed February 1, 2017, <https://statistics.laerd.com/statistical-guides/pearson-correlation-coefficient-statistical-guide.php>.

Figure 1

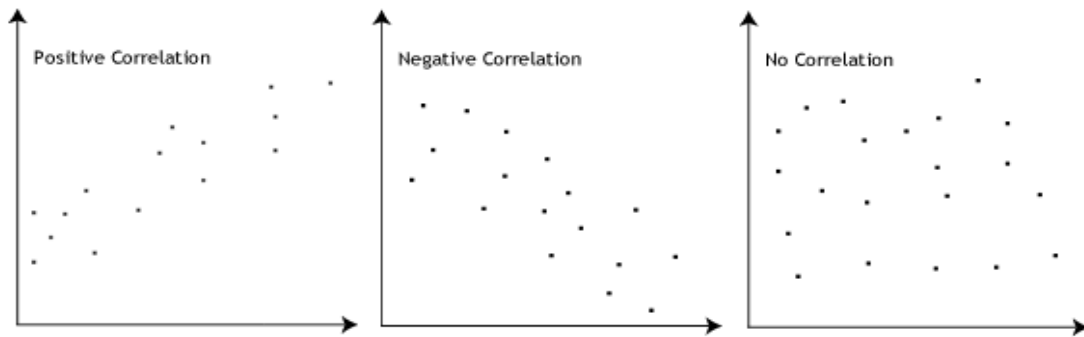


Figure 2

Strength of Association	Coefficient, $r$	
	Positive	Negative
Small	.1 to .3	-0.1 to -0.3
Medium	.3 to .5	-0.3 to -0.5
Large	.5 to 1.0	-0.5 to -1.0

Correlations with the greatest numerical significance are listed below:

- 1) Recent bullying and past bullying: .405
- 2) Recent bullying and Satisfaction with life: -.303
- 3) Recent bullying and K6: .465
- 4) Past bullying and K6: .306
- 5) Satisfaction with life and K6: -.481
- 6) Performance anxiety and K6: .330

These correlations indicate that the more bullying a singer experienced during childhood, the greater amount of current bullying they reported. When current bullying is higher, satisfaction of life decreases and overall anxiety increases. Childhood bullying also has a significant correlation to increased levels of depression and anxiety. The higher a singer scored on the Satisfaction With Life scale, the lower they scored on the K6,

which means they have lower levels of depression and anxiety. Not surprisingly, the more that depression and anxiety (K6) was reported, so grew the singer's performance anxiety. For a full list of the correlations, see figure 14 in the appendix.

The next step in the data analysis was a regression analysis. Regression analysis is a statistical tool that uses one or more independent variables to predict the outcome of a dependent variable. In the analysis, recent bullying was the dependent variable with past bullying (step 1), age (step 2), and satisfaction with life, performance anxiety, and K6 (step 3) as independent variables. The  $R^2$  change was significant at each step and specific values can be found in figure 15 of the appendix. This means that as each new variable was added, the likelihood of current bullying (dependent variable) increased. The final  $R^2$  value was .308 and was statistically significant. The regression coefficients were significant for past bullying, age, and K6.

Finally, an Analysis of Variance (ANOVA) was conducted to evaluate responses to the last item on the survey. Numerical values of this test can be found in figures 16a-c in the appendix. This test compares a singer's desire to perform with other variables including past and recent bullying, satisfaction with life, performance anxiety, and K6. As the values of these variables increased, desire to perform decreased. This means that if a participant had reported experiencing higher childhood and current bullying, lower satisfaction with life, higher performance anxiety, and higher depressive and anxiety symptoms, they are less likely to pursue performance as a career.

### **Conclusion**

The survey data show that there is a significant correlation between bullying and performance anxiety. In the literature on both of these topics there is a common

connection that appears to link the two together: shame. Psychologist Gershen

Kaufman states:

Few strivings are as compelling as is our need to identify with someone, to feel a part of something, to belong somewhere. Whether it is our relation to one significant other, or the family, or one's own peer group, we experience some vital need to belong. And it is precisely the identification need which most assuredly confers that special sense of belonging. So powerful is that striving that we might feel obliged to do most anything in order to secure our place.<sup>40</sup>

The basic emotion of shame exists in humans as an evolutionary function because we desire to be in relationships and groups. It helps us redirect inappropriate behavior when our membership to a group is threatened. We experience shame because we wish to be accepted by others.<sup>41</sup> In other words, bullying leads to shame and shame leads to anxiety, which could easily manifest as performance anxiety in the singer; however, further studies would need to take place in order to validate this general hypothesis.

How is this information important for the singer? Mental health is key for a long and successful career and singers must take care of their mental health to be happier, more consistent performers. It is important for singers and educators to recognize deep-rooted issues such as bullying and know how to address them. Stress, depression, and anxiety can manifest in other types of bodily tension, which can cause further problems with the vocal mechanism. Techniques to combat

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<sup>40</sup> Jonathan Fast, PhD, *Beyond Bullying: Breaking the Cycle of Shame, Bullying, and Violence* (New York: Oxford University Press, 2016), 3.

<sup>41</sup> Jonathan Fast, PhD, *Beyond Bullying: Breaking the Cycle of Shame, Bullying, and Violence* (New York: Oxford University Press, 2016), 1-4.

performance anxiety will vary from person to person, so it is important for each singer to find an individual way to cope with anxiety and current bullying they may experience in a competitive field. Although the health of the body and vocal mechanism are important, emotional and psychological issues can impact both; therefore, mental health is the most important aspect of a singer's health.

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## APPENDIX A

DATA COLLECTED FEBRUARY- SEPTEMBER 2016

## Figure 1. Survey of bullying and performance anxiety in classically trained singers

### Anonymous Survey

This survey, compiled by Katherine Thilakaratne—a doctoral student of Voice at Arizona State University, seeks to better understand the experiences of classically trained singers. This survey is anonymous---your name is not required, however, you must be over 18 and have attended or are currently attending a University with a major in Opera or Vocal Performance—and we ask you to be candid in your responses.

1. What is your gender? 0 = Female 1 = Male
2. What year were you born? \_\_\_\_\_
3. Which of the following best describes your ethnic background? 0 = Hispanic; 1 = Non-Hispanic
4. Which of the following best describes your race? 0 = White; 1 = Black; 2 = American Indian or Alaskan Native; 3 = Asian; 4 = Native Hawaiian or Pacific Islander; 5 = Mixed; 6 = Other

The next set of questions concerns your exposure to hostile, aggressive, humiliating, bullying, and/or mean-spirited treatment at the hands of teachers, coaches, conductors, directors, colleagues, supervisors, or peers during the course of your musical training or career.

Within the last 6 months, how often were you exposed to each of the following actions?

Answer using a 1 to 5 scale with 1 = Never; 2 = Now and then; 3 = Several times per month; 4 = Several times per week; 5 = Almost Daily

5. Being ignored or excluded.
6. Being humiliated or ridiculed in connection with your performance.
7. Receiving criticism of your errors or mistakes.
8. The spreading of gossip or rumors about you.
9. Being ridiculed because of your race or ethnic background?
10. Being ridiculed because of your weight or size?
11. Threats of violence or physical harm.
12. Being given trivial or unpleasant tasks to perform.
13. Being shouted at or being the target of spontaneous anger.
14. Being inappropriately touched
15. Being treated unfairly because of your gender

When you were a child or adolescent, how often were you exposed to the following actions? Use the same 1 to 5 scale as before.

16. Being physically threatened by adults (parents or teachers).
17. Being made fun of or ridiculed by peers?
18. Being excluded by peers because of some physical characteristic (height, weight, physical infirmity, etc.).
19. Being the subject of gossip.
20. Having adults question your intelligence.
21. Having adults question your moral character (your goodness or worth).

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For the next set of statements, we are interested in how much you agree or disagree with each. Use the following scale to indicate your agreement/disagreement:

- 1 = Strongly DISAGREE
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Neither Agree nor Disagree
- 5 = Slightly agree
- 6 = Agree
- 7 = Strongly AGREE

22. In most ways, life is close to my ideal.

23. The conditions of my life are excellent.  
 24. I am satisfied with my life.  
 25. So far I have gotten the important things I want in life.  
 26. If I could live my life over, I would change almost nothing.

---

For the next set of items, use the following scale to respond: 1 = Never; 2 = A little of the time; 3 = Some of the time; 4 = Most of the time; 5 = All of the time.

How frequently in the past 30 days have you felt...

27. Hopeless  
 28. Nervous  
 29. Restless or fidgety  
 30. So depressed that nothing could cheer you up  
 31. That everything was an effort  
 32. Worthless

---

For the next set of questions, please think about music in general and your specific musical genre. Think about what it is like for you when you perform.

	Not at all		About Half the time			All of the time	
33. Before I perform, I get butterflies In my stomach	0	1	2	3	4	5	6
34. I often worry about my ability to perform	0	1	2	3	4	5	6
35. I would rather perform on my own than in front of other people	0	1	2	3	4	5	6
36. Before I perform, I tremble or shake	0	1	2	3	4	5	6
37. When I perform in front of an audience, I am afraid of making mistakes	0	1	2	3	4	5	6
38. When I perform in front of an audience, my heart beats very fast	0	1	2	3	4	5	6
39. When I perform in front of an audience, I find it hard to concentrate on my music	0	1	2	3	4	5	6
40. If I make a mistake during a performance I usually panic	0	1	2	3	4	5	6
41. When I perform in front of an audience, I get sweaty hands	0	1	2	3	4	5	6
42. When I finish performing, I usually feel happy with my performance	0	1	2	3	4	5	6
43. I try to avoid performing on my own at a school concert	0	1	2	3	4	5	6
44. Just before I perform, I feel nervous	0	1	2	3	4	5	6
45. I worry that my family or teacher might Not like my performance	0	1	2	3	4	5	6
46. I would rather perform in a group or Ensemble than on my own	0	1	2	3	4	5	6
47. My muscles feel tense when I perform	0	1	2	3	4	5	6
48. I have shallow breathing when I perform	0	1	2	3	4	5	6
49. When I perform, I find it hard to connect with the text or character of my piece	0	1	2	3	4	5	6

50. Has bullying hindered your desire to continue a career in performance?  
 \_\_\_\_\_Yes \_\_\_\_\_No

**Figure 2a. What is your gender?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	58	16.2	16.5	16.5
	Female	294	82.4	83.5	100.0
	Total	352	98.6	100.0	
Missing	System	5	1.4		
Total		357	100.0		

**Figure 2b. What is your gender?**

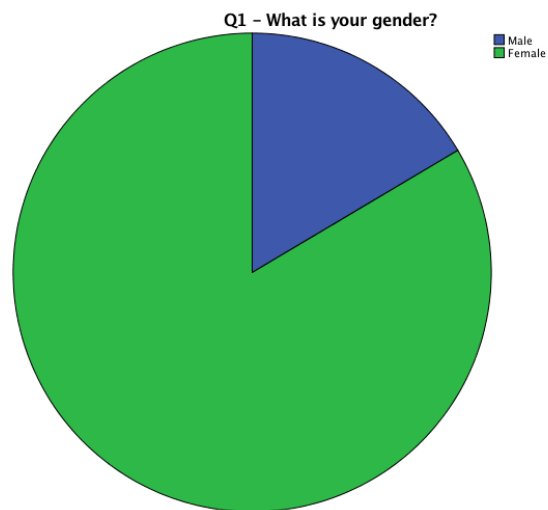
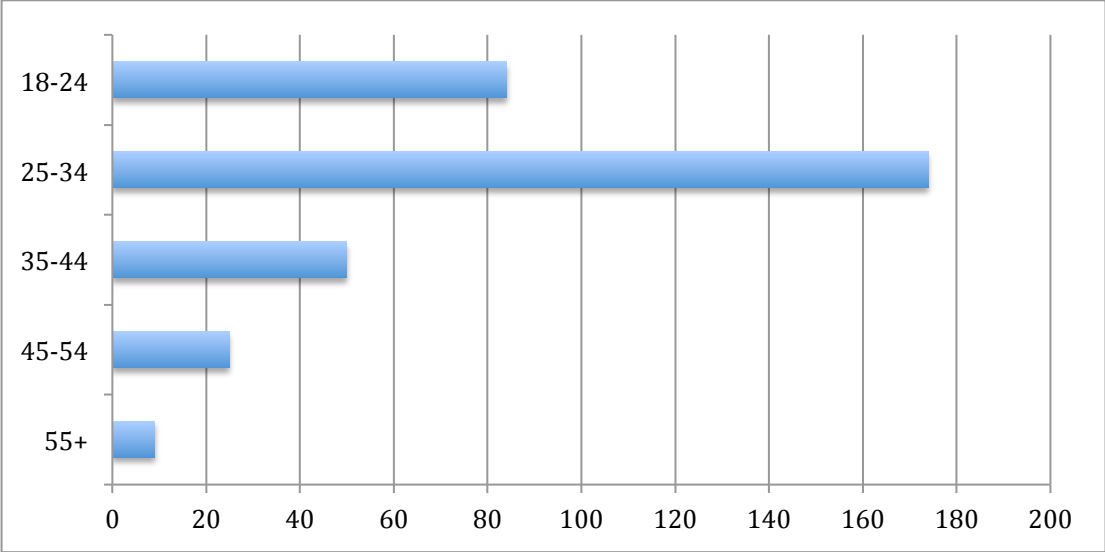


Figure 3a. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 -24	84	23.53		
			48.74		
			14		
			7		
			2.52		
			95.8		
	25-34	174		100.0	100.0
	35-44	50			
	45-54	25			
	55+	9			
	Total	342		100.0	
System Missing		15	4.2		
Total		357	100.0		

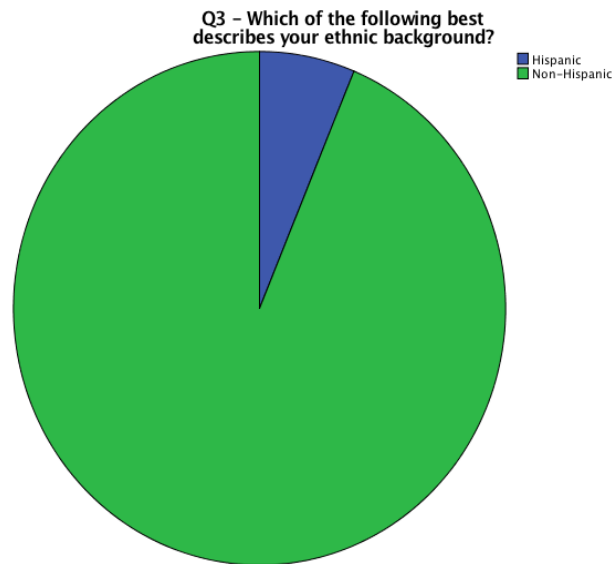
Figure 3b. Age



**Figure 4a. Ethnic Background**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hispanic	22	6.2	6.3	6.3
	Non-Hispanic	329	92.2	93.7	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Figure 4b. Ethnic Background**

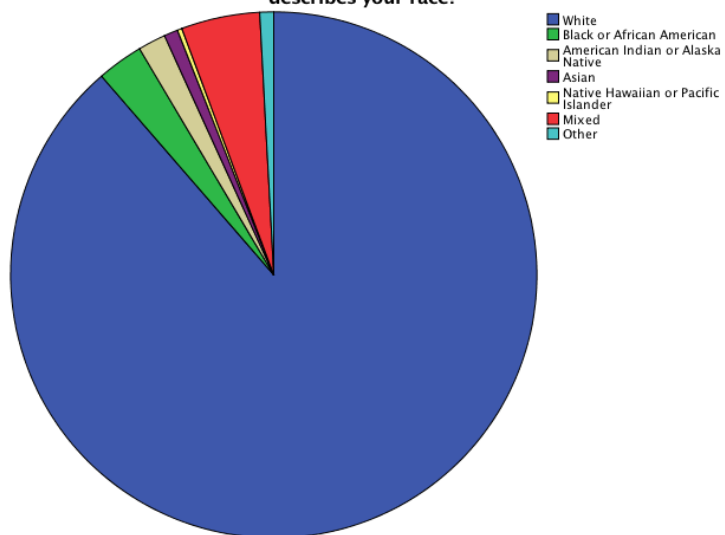


**Figure 5a. Race**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid White	312	87.4	88.6	88.6
Black or African American	10	2.8	2.8	91.5
American Indian or Alaska Native	6	1.7	1.7	93.2
Asian	3	.8	.9	94.0
Native Hawaiian or Pacific Islander	1	.3	.3	94.3
Mixed	17	4.8	4.8	99.1
Other	3	.8	.9	100.0
Total	352	98.6	100.0	
Missing System	5	1.4		
Total	357	100.0		

**Figure 5b. Race**

Q4 - Which of the following best describes your race?

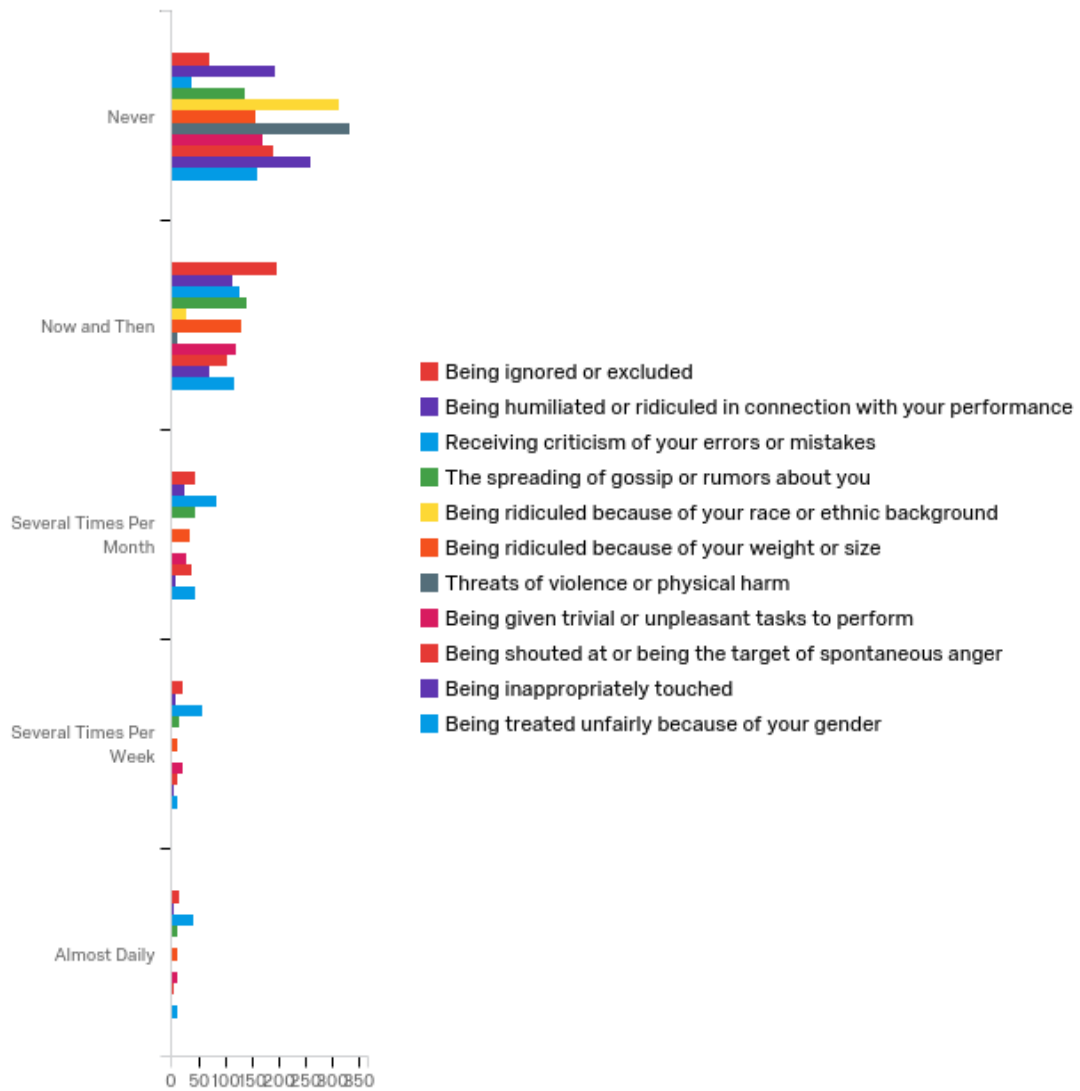




**Figure 6a. Current bullying within the past six months**

#	Question	Never		Now and Then		Several Times Per Month		Several Times Per Week		Almost Daily		Total
1	Being ignored or excluded	20.57%	72	56.29%	197	12.86%	45	6.00%	21	4.29%	15	350
2	Being humiliated or ridiculed in connection with your performance	56.03%	195	33.05%	115	6.90%	24	2.30%	8	1.72%	6	348
3	Receiving criticism of your errors or mistakes	11.11%	39	36.18%	127	24.50%	86	16.24%	57	11.97%	42	351
4	The spreading of gossip or rumors about you	39.71%	139	40.00%	140	12.86%	45	4.29%	15	3.14%	11	350
5	Being ridiculed because of your race or ethnic background	89.94%	313	8.05%	28	0.86%	3	0.86%	3	0.29%	1	348
6	Being ridiculed because of your weight or size	44.73%	157	37.61%	132	10.26%	36	3.70%	13	3.70%	13	351
7	Threats of violence or physical harm	95.71%	335	3.14%	11	0.57%	2	0.29%	1	0.29%	1	350
8	Being given trivial or unpleasant tasks to perform	48.43%	170	34.19%	120	8.26%	29	6.27%	22	2.85%	10	351
9	Being shouted at or being the target of spontaneous anger	54.86%	192	29.43%	103	10.86%	38	3.14%	11	1.71%	6	350
10	Being inappropriately touched	74.86%	262	20.29%	71	2.57%	9	1.43%	5	0.86%	3	350
11	Being treated unfairly because of your gender	46.42%	162	33.81%	118	12.89%	45	3.15%	11	3.72%	13	349

**Figure 6b. Current bullying within the past six months**



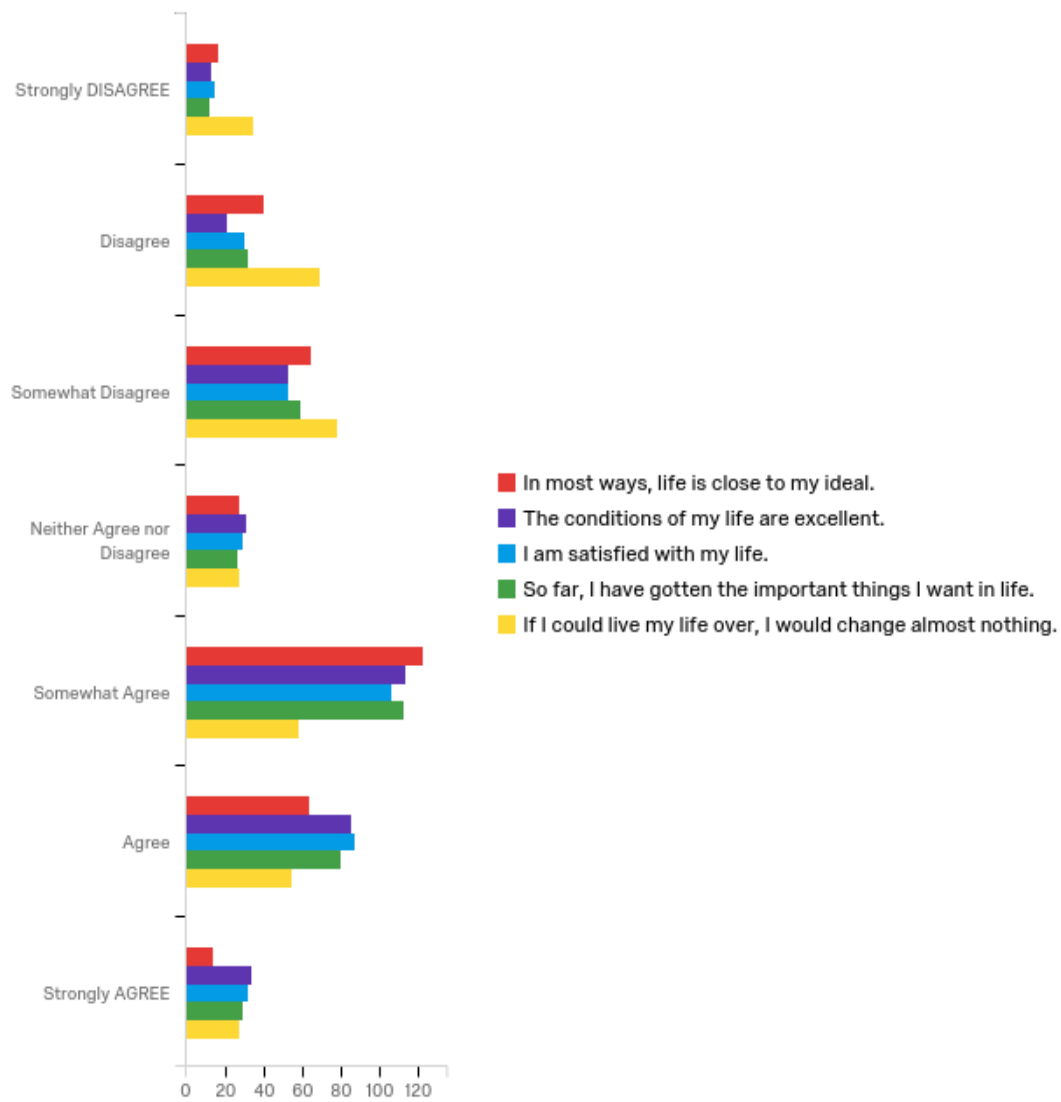
**Figure 7. Childhood bullying**

#	Question	Never	Now and Then	Several Times Per Month	Several Times Per Week	Almost Daily	Total
1	Being physically threatened by adults (parents or teachers)	202 (57.55%)	93 (26.50%)	33 (9.40%)	12 (3.42%)	11 (3.13%)	351
2	Being made fun of or ridiculed by peers	18 (5.11%)	106 (30.11%)	94 (26.70%)	65 (18.47%)	69 (19.60%)	352
3	Being excluded by peers because of some physical characteristic (height, weight, physical infirmity, etc.)	95 (27.07%)	92 (26.21%)	60 (17.09%)	44 (12.54%)	60 (17.09%)	351
4	Being the subject of gossip	28 (7.98%)	146 (41.60%)	81 (23.08%)	58 (16.52%)	38 (10.83%)	351
5	Having adults question your intelligence	139 (39.71%)	119 (34.00%)	40 (11.43%)	29 (8.29%)	23 (6.57%)	350
6	Having adults question your moral character (your goodness or worth)	148 (42.05%)	109 (30.97%)	49 (13.92%)	29 (8.24%)	17 (4.83%)	352

**Figure 8a. Satisfaction with life scale**

Question	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly AGREE	Total
In most ways, life is close to my ideal.	17 (4.84%)	40 (11.40%)	65 (18.52%)	28 (7.98%)	123 (35.04%)	64 (18.23%)	14 (3.99%)	351
The conditions of my life are excellent.	13 (3.69%)	21 (5.97%)	53 (15.06%)	31 (8.81%)	114 (32.39%)	86 (24.43%)	34 (9.66%)	352
I am satisfied with my life.	15 (4.26%)	30 (8.52%)	53 (15.06%)	29 (8.24%)	106 (30.11%)	87 (24.72%)	32 (9.09%)	352
So far, I have gotten the important things I want in life.	12 (3.41%)	32 (9.09%)	59 (16.76%)	27 (7.67%)	113 (32.10%)	80 (22.73%)	29 (8.24%)	352
If I could live my life over, I would change almost nothing.	35 (9.97%)	69 (19.66%)	78 (22.22%)	28 (7.98%)	58 (16.52%)	55 (15.67%)	28 (7.98%)	351

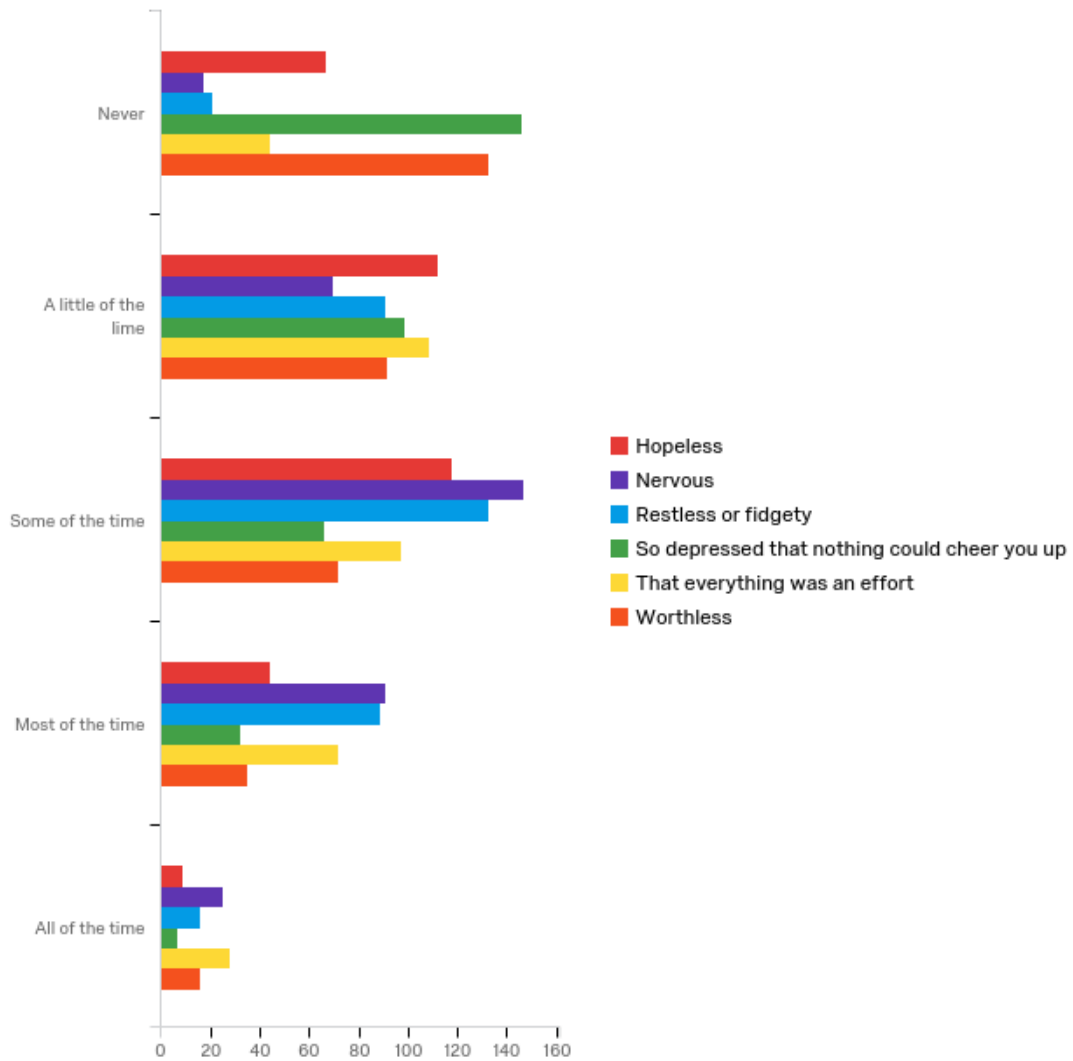
**Figure 8b. Satisfaction with life scale**



**Figure 9a. K6**

#	Question	Never	A little of the lime	Some of the time	Most of the time	All of the time	Total
1	Hopeless	67 19.14%	112 32.00%	118 33.71%	44 12.57%	9 2.57%	350
2	Nervous	17 4.86%	70 20.00%	147 42.00%	91 26.00%	25 7.14%	350
3	Restless or fidgety	21 6.00%	91 26.00%	133 38.00%	89 25.43%	16 4.57%	350
4	So depressed that nothing could cheer you up	146 41.71%	99 28.29%	66 18.86%	32 9.14%	7 2.00%	350
5	That everything was an effort	44 12.57%	109 31.14%	97 27.71%	72 20.57%	28 8.00%	350
6	Worthless	133 38.22%	92 26.44%	72 20.69%	35 10.06%	16 4.60%	348

Figure 9b. K6



**Figure 10a. Performance anxiety**

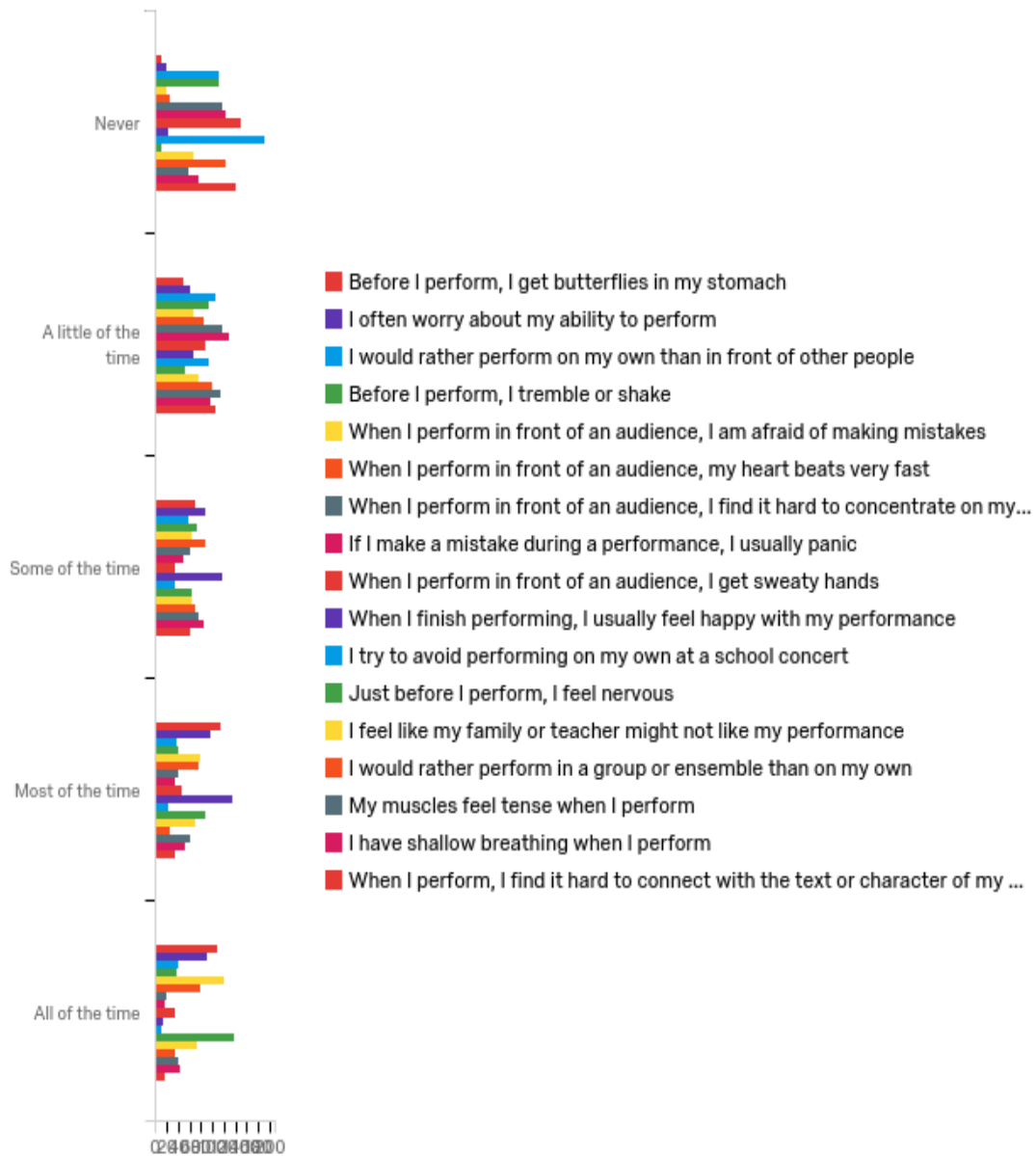
#	Question	Never	A little of the time	Some of the time	Most of the time	All of the time	Total
1	Before I perform, I get butterflies in my stomach	10 (2.84%)	49 (13.92%)	70 (19.89%)	114 (32.39%)	109 (30.97%)	352
2	I often worry about my ability to perform	18 (5.13%)	61 (17.38%)	87 (24.79%)	95 (27.07%)	90 (25.64%)	351
3	I would rather perform on my own than in front of other people	110 (31.25%)	106 (30.11%)	59 (16.76%)	38 (10.80%)	39 (11.08%)	352
4	Before I perform, I tremble or shake	111 (31.62%)	92 (26.21%)	73 (20.80%)	39 (11.11%)	36 (10.26%)	351
5	When I perform in front of an audience, I am afraid of making mistakes	20 (5.70%)	68 (19.37%)	63 (17.95%)	79 (22.51%)	121 (34.47%)	351
6	When I perform in front of an audience, my heart beats very fast	26 (7.39%)	83 (23.58%)	88 (25.00%)	75 (21.31%)	80 (22.73%)	352
7	When I perform in front of an audience, I find it hard to concentrate on my music	116 (32.95%)	117 (33.24%)	62 (17.61%)	39 (11.08%)	18 (5.11%)	352
8	If I make a mistake during a performance, I usually panic	123 (34.94%)	129 (36.65%)	50 (14.20%)	33 (9.38%)	17 (4.83%)	352
9	When I perform in front of an audience, I get sweaty hands	151 (42.90%)	87 (24.72%)	34 (9.66%)	45 (12.78%)	35 (9.94%)	352
10	When I finish performing, I usually feel happy with my performance	21 (5.97%)	67 (19.03%)	116 (32.95%)	135 (38.35%)	13 (3.69%)	352
11	I try to avoid performing on my own at a school concert	191 (54.42%)	93 (26.50%)	34 (9.69%)	22 (6.27%)	11 (3.13%)	351
12	Just before I perform, I feel nervous	11 (3.13%)	51 (14.53%)	65 (18.52%)	86 (24.50%)	138 (39.32%)	351



(Continued)

13	I feel like my family or teacher might not like my performance	66 (18.75%)	77 (21.88%)	65 (18.47%)	71 (20.17%)	73 (20.74%)	352
14	I would rather perform in a group or ensemble than on my own	122 (34.86%)	100 (28.57%)	69 (19.71%)	26 (7.43%)	33 (9.43%)	350
15	My muscles feel tense when I perform	57 (16.29%)	113 (32.29%)	77 (22.00%)	62 (17.71%)	41 (11.71%)	350
16	I have shallow breathing when I perform	77 (21.94%)	95 (27.07%)	83 (23.65%)	52 (14.81%)	44 (12.54%)	351
17	When I perform, I find it hard to connect with the text or character of my piece	140 (39.77%)	104 (29.55%)	60 (17.05%)	33 (9.38%)	15 (4.26%)	352

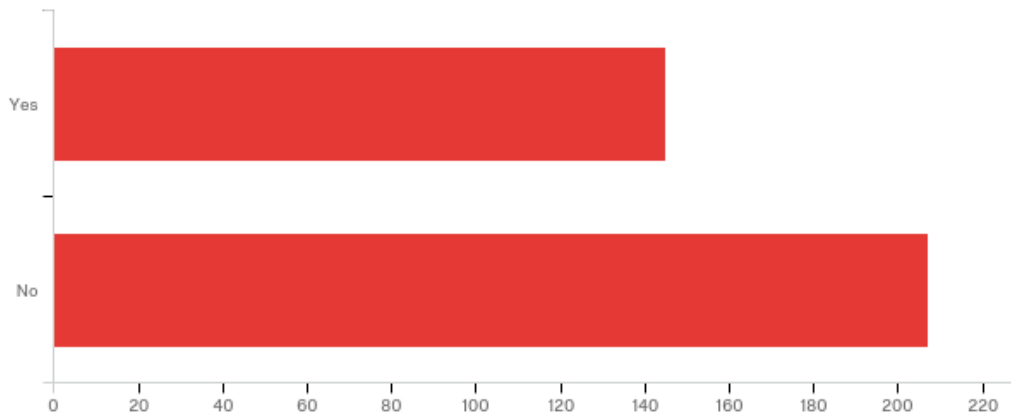
**Figure 10b. Performance anxiety**



**Figure 11a. Has bullying hindered your desire to continue a career in performance?**

	Has bullying hindered your desire to continue a career in performance?	Mean	Std. Deviation	N
Past bullying	Yes	16.1567	5.16474	134
	No	13.1771	4.55449	192
	Total	14.4018	5.02620	326
Satisfaction with Life	Yes	19.8433	6.90413	134
	No	23.4427	6.14032	192
	Total	21.9632	6.69410	326
MPAI-A	Yes	50.3507	13.27854	134
	No	44.4740	12.16119	192
	Total	46.8896	12.94058	326
Recent bullying	Yes	21.7985	6.18363	134
	No	17.2865	4.31923	192
	Total	19.1411	5.61742	326
K6	Yes	10.9851	4.64043	134
	No	8.5313	4.29404	192
	Total	9.5399	4.59464	326

**Figure 11b. Has bullying hindered your desire to continue a career in performance?**



**Figure 12a. Averages of survey categories**

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Recent bullying	340	33.00	11.00	44.00	19.1382	5.68248
Past bullying	348	24.00	6.00	30.00	14.4741	5.16215
Satisfaction with Life	350	30.00	5.00	35.00	21.9857	6.65673
MPAI-A	344	63.00	22.00	85.00	47.1279	13.02010
Q14 - Has bullying hindered your desire to continue a career in performance?	352	1	1	2	1.59	.493
Age	342	51.00	18.00	69.00	30.9415	9.53906
K6	348	24.00	.00	24.00	9.5230	4.64684
Valid N (listwise)	317					

**Figure 12b. Averages of survey categories**

	Mean	Std. Deviation	N
Recent bullying	19.1388	5.52036	317
Past bullying	14.4921	5.04324	317
Age	30.7382	9.35537	317
Satisfaction with Life	21.9748	6.72418	317
MPAI-A	46.7855	12.92229	317
K6	9.4637	4.55516	317

**Figure 13. Gender Descriptive Statistics**

	Q1 - What is your gender?	Mean	Std. Deviation	N
Past bullying	Male	14.8148	5.51866	54
	Female	14.2731	4.87769	271
	Total	14.3631	4.98490	325
Satisfaction with Life	Male	20.9630	7.94786	54
	Female	22.1365	6.41293	271
	Total	21.9415	6.69298	325
MPAI-A	Male	43.9630	12.29813	54
	Female	47.4723	13.03180	271
	Total	46.8892	12.96053	325
Recent bullying	Male	19.2593	6.78563	54
	Female	19.1328	5.37388	271
	Total	19.1538	5.62136	325
K6	Male	10.0370	5.33752	54
	Female	9.4428	4.44508	271
	Total	9.5415	4.60163	325

**Figure 14. Correlations**

		Recent bullying	Past bullying	Age	Satisfaction with Life	MPAI-A	K6
Pearson Correlation	Recent bullying	1.000	.405	-.159	-.303	.177	.465
	Past bullying	.405	1.000	.066	-.259	.150	.306
	Age	-.159	.066	1.000	-.082	-.126	-.214
	Satisfaction with Life	-.303	-.259	-.082	1.000	-.142	-.481
	MPAI-A	.177	.150	-.126	-.142	1.000	.330
	K6	.465	.306	-.214	-.481	.330	1.000
Sig. (1-tailed)	Recent bullying	.	.000	.002	.000	.001	.000
	Past bullying	.000	.	.120	.000	.004	.000
	Age	.002	.120	.	.074	.012	.000
	Satisfaction with Life	.000	.000	.074	.	.006	.000
	MPAI-A	.001	.004	.012	.006	.	.000
	K6	.000	.000	.000	.000	.000	.
N	Recent bullying	317	317	317	317	317	317
	Past bullying	317	317	317	317	317	317
	Age	317	317	317	317	317	317
	Satisfaction with Life	317	317	317	317	317	317
	MPAI-A	317	317	317	317	317	317
	K6	317	317	317	317	317	317

**Figure 15. Regression Analysis**

Adjusted R Square	Std. Error of the Estimate	Change Statistics				
		R Square Change	F Change	df1	df2	Sig. F Change
.161	5.05555	.164	61.777	1	315	.000
.193	4.95799	.035	13.518	1	314	.000
.297	4.62942	.109	16.384	3	311	.000

a. Predictors: (Constant), Past bullying

b. Predictors: (Constant), Past bullying, Age

c. Predictors: (Constant), Past bullying, Age, MPAI-A, Satisfaction with Life, K6

**Figure 16a. ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1578.941	1	1578.941	61.777	.000 <sup>b</sup>
	Residual	8050.951	315	25.559		
	Total	9629.893	316			
2	Regression	1911.248	2	955.624	38.875	.000 <sup>c</sup>
	Residual	7718.645	314	24.582		
	Total	9629.893	316			
3	Regression	2964.683	5	592.937	27.667	.000 <sup>d</sup>
	Residual	6665.210	311	21.432		
	Total	9629.893	316			

a. Dependent Variable: Recent bullying

b. Predictors: (Constant), Past bullying

c. Predictors: (Constant), Past bullying, Age

d. Predictors: (Constant), Past bullying, Age, MPAI-A, Satisfaction with Life, K6

**Figure 16b. Coefficients<sup>a</sup>**

1	Regression	1578.941	1	1578.941	61.777	.000 <sup>b</sup>
	Residual	8050.951	315	25.559		
	Total	9629.893	316			
2	Regression	1911.248	2	955.624	38.875	.000 <sup>c</sup>
	Residual	7718.645	314	24.582		
	Total	9629.893	316			
3	Regression	2964.683	5	592.937	27.667	.000 <sup>d</sup>
	Residual	6665.210	311	21.432		
	Total	9629.893	316			

a. Dependent Variable: Recent bullying

b. Predictors: (Constant), Past bullying

c. Predictors: (Constant), Past bullying, Age

d. Predictors: (Constant), Past bullying, Age, MPAI-A, Satisfaction with Life, K6



**Figure 16c. Excluded Variables<sup>a</sup>**

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
					Tolerance
1 Age	-.186 <sup>b</sup>	-3.677	.000	-.203	.996
Satisfaction with Life	-.212 <sup>b</sup>	-4.070	.000	-.224	.933
MPAI-A	.119 <sup>b</sup>	2.290	.023	.128	.977
K6	.376 <sup>b</sup>	7.537	.000	.391	.906
2 Satisfaction with Life	-.226 <sup>c</sup>	-4.432	.000	-.243	.929
MPAI-A	.094 <sup>c</sup>	1.836	.067	.103	.959
K6	.349 <sup>c</sup>	6.820	.000	.360	.851

a. Dependent Variable: Recent bullying

b. Predictors in the Model: (Constant), Past bullying

c. Predictors in the Model: (Constant), Past bullying, Age